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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,559	02/09/2004	Clifford F. Biddulph	PVOZ 2 00015	8972

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EXAMINER	
ZHENG, LOIS L	
ART UNIT	**PAPER NUMBER**
1742	

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/774,559	BIDDULPH ET AL.	
	Examiner	Art Unit	
	Lois Zheng	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *10-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9, 19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/9/04, 11/15/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1-9 and 19-20, drawn to a coating composition, classified in class 106, subclass 14.05.

   II. Claims 10-18, drawn to a coating process, classified in class 148, subclass 267.

2. Inventions I and II are related as composition and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the composition as claimed can be practiced with another materially different composition or (2) the composition as claimed can be used in a materially different process of using that composition. In the instant case the process for using the composition as claimed can be practiced with another materially different composition such as a chromium free conversion coating composition.

3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art due to their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Scott McCollister on 14 November 2006 a provisional election was made with traverse to prosecute the invention of group I, claims 1-9 and 19-20. Affirmation of this election must be made by applicant in replying to this

Office action. Claims 10-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-9 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/07902(WO'902) in view of Huvar US 4,349,392(Huvar).

The examiner would like to thank the applicant for providing the translation for WO'902 and will rely on the translation for the teachings of WO'902.

WO'902 teaches an anticorrosive aqueous acidic coating solution comprising 0.02mol/l – 0.58mol/l of Cr(III), 0.1mol/l – 0.42mol/l of phosphate ions incorporated from phosphoric acid or sodium phosphate, 0.001mol/l – 0.1mol/l of iron, cobalt and/or nickel ions. WO'902 further teaches that the coating solution comprises one or more citric acid, tartaric acid, malonic acid as complexing agents. The pH of the coating solution is maintained between 1 and 4 by nitric or sulfuric acids. WO'902 further teaches that the phosphate is favorably added for the formation of a dark conversion coating and iron, cobalt and/or nickel are added for the formation of a black color coating. See last paragraph on page 1 – bottom of page 2 of the translation.

Regarding claims 1-9 and 19-20, the one or more citric acid, tartaric acid and malonic acid as taught by WO'902 read on the claimed chelate. The nitrate and sulfate

ions from the nitric or sulfuric acid used for pH control as taught by WO'902 read on the claimed sulfate and/or nitrate ions. The iron, cobalt and nickel ions as taught by WO'902 read on the claimed transition metal or metalloid.

In addition, the component concentrations of Cr(III) ions, phosphorous anions, Fe/Co/Ni ions, chelate and the pH value ranges in the coating solution of WO'902 overlap the claimed component concentration ranges and the claimed pH value range. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed component concentrations and pH range from the disclosed ranges of WO'902 would have been obvious to one skilled in the art since WO'902 teaches the same utilities in its disclosed component concentration and pH value ranges.

However, WO'902 does not teach the claimed chelate concentration range as recited in instant claims 7 and 19.

Huvar also teaches a Cr(III) containing acidic coating solution comprising Cr(III) ions, iron/cobalt/nickel ions, nitrate and sulfate ions(col. 3 line 39-col. 4 line 28, col. 6 lines 56-68), and carboxylic acids such as citric acid, tartaric acid, malonic acid, in the amount of about 0.05 to about 4.0g/l(col. 6 lines 1-33).

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the carboxylic acid concentration of about 0.05 to about 4.0g/l as taught by Huvar into the coating solution of WO'902 in order to increase clarity and initial hardness to the chromate film as taught by Huvar(col. 6 lines 1-6).

Furthermore, the carboxylic acid concentration range as taught by WO'902 in view of Huvar overlaps the claimed chelate concentration ranges as recited in claims 7

and 19. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed chelate concentration range from the disclosed carboxylic acid concentration range of WO'902 in view of Huvar would have been obvious to one skilled in the art since WO'902 in view of Huvar teach the same utilities in their disclosed carboxylic acid concentration range.

7. Claims 1-9 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima et al. US 6,719,852 B2(Oshima) in view of WO 02/07902(WO'902).

Oshima teaches an aqueous acidic coating solution comprising 0.2-5g/l of trivalent chromium ions(col. 4 lines 14-21), 0.2-10g/l of cobalt ions(col. 4 lines 33-45), inorganic salts of nitric or sulfuric acid(col. 4 lines 54-60), 0.1-50g/l of phosphoric acid (col. 4 lines 61-67) and 1-30g/l of carboxylic acids, such as citric acid, tartartic acid, malonic acid and succinic acid (col. 5 lines 1-7) and 0.2-13g/l of oxalic acid(col. 4 lines 27-32). The coating solution of Oshima has a pH of 0.5-4(col. 5 lines 8-10).

Regarding claims 1-9 and 19-20, the oxalic acid or any of the carboxylic acids listed above as taught by Oshima read on the claimed chelate. The nitrate and sulfate ions from the inorganic salts of nitric or sulfuric acid as taught by Oshima read on the claimed sulfate and/or nitrate ions. The cobalt ions as taught by Oshima read on the claimed transition metal or metalloid.

However, even though Oshima teaches various color finishes in its examples (Table 4). Oshima does not explicitly teach that the coating solution can produce a black chromate coating as claimed.

The teachings of WO'902 are discussed in paragraph 6 above. WO'902 further teaches that to produce a black finish, the concentration of cobalt should be between 0.001 mol/l and 0.1 mol/l(i.e. 0.059 – 5.9g/l)(translation, page 2 lines 4-6 from the bottom). Black pigments can also be added according to WO'902(translation, page 3 two lines after "Day 2").

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated Co concentration of 0.001-0.1mol/l or the black color pigments as taught by WO'902 into the coating solution of Oshima in order to produce a black chromate coating.

In addition, the component concentrations of Cr(III) ions, phosphorous anions, Co ions, oxalic acid and/or carboxylic acids and the pH value in the coating solution of Oshima in view of WO'902 overlap the claimed component concentration ranges and the claimed pH value range. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed component concentrations and pH range from the disclosed ranges of Oshima in view of WO'902 would have been obvious to one skilled in the art since Oshima in view of WO'902 teach the same utilities in their disclosed component concentration and pH value ranges.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LLZ

ROY KING
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